

WHAT IS CLAIMED IS:

1. An apparatus for realizing an alarm function using a mobile terminal and a charging device for charging the mobile terminal, the apparatus comprising:
 - 5 a mobile terminal controller for generating an alarm control signal at a predetermined time period ahead of a predetermined alarm time;
 - a mobile terminal interface for transmitting the alarm control signal to the charging device;
 - a charging device interface for receiving the alarm control signal from the
 - 10 mobile terminal; and
 - a lamp driver for generating a lamp driving signal for controlling a lamp in response to the received alarm control signal.
2. The apparatus of claim 1, wherein the alarm control signal is
- 15 repeatedly generated at predetermined intervals.
3. The apparatus of claim 1, wherein the alarm control signal is repeatedly generated at a predetermined interval.
- 20 4. The apparatus of claim 2, wherein the lamp driver increases electric power supplied to the lamp, each time the repeatedly generated alarm control signal is received.
5. The apparatus of claim 1, wherein the controller generates a lamp
- 25 off signal after a lapse of the predetermined time period.

6. The apparatus of claim 1, further comprising:

a mobile terminal sensor for determining whether the mobile terminal is detached from the charging device, and generating a mobile terminal detachment signal if the mobile terminal is detached from the charging device; wherein

5 the lamp driver turns off the lamp in response to the mobile terminal detachment signal from the mobile terminal sensor.

7. The apparatus of claim 1, wherein an audio alarm is provided at the predetermined alarm time.

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8. A method for realizing an alarm function using a mobile terminal and a charging device for charging the mobile terminal, the method comprising the steps of:

generating by the mobile terminal an alarm control signal at a predetermined
15 time period ahead of a predetermined alarm time;

transmitting by the mobile terminal the alarm control signal to the charging device via a mobile terminal interface;

receiving by the charging device the alarm control signal from the mobile terminal via a charging device interface; and

20 generating by the charging device a lamp driving signal for controlling a lamp in response to the received alarm control signal.

9. The method of claim 8, wherein the alarm control signal is repeatedly generated at predetermined intervals.

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10. The method of claim 8, wherein the alarm control signal is repeatedly generated at a predetermined interval.

11. The method of claim 9, wherein the charging device increases electric power supplied to the lamp, each time the repeatedly generated alarm control signal is received.

5 12. The method of claim 8, wherein the mobile terminal generates a lamp off signal after a lapse of the predetermined time period .

13. The method of claim 8, further comprising:
determining by the charging device whether the mobile terminal is detached
10 from the charging device;
generating a mobile terminal detachment signal if the mobile terminal is detached from the charging device; and
turning off the lamp in response to the mobile terminal detachment signal.

15 14. The method of claim 8, further comprising:
providing an audio alarm at the predetermined alarm time.

15. An apparatus for realizing an alarm function using a mobile terminal and a charging device for charging the mobile terminal, the apparatus
20 comprising:

a mobile terminal controller for generating an alarm control signal at a predetermined time;

a mobile terminal interface for transmitting the alarm control signal to the charging device;

25 a charging device interface for receiving the alarm control signal from the mobile terminal;

a lamp for providing a visual alarm;

a lamp driver for generating a lamp driving signal for controlling the lamp in response to the received alarm control signal; and

a speaker for providing an audio alarm at a predetermined alarm time after the predetermined time.